

Chapter 7
Lesson 7

Using Equivalent Decimals

You will need

- thousandths grids
- pencil crayons



GOAL

Compare and order fractions and decimals using equivalents.

Desmond read about a past NHL hockey season on the Internet. Each team played the same number of games. The Edmonton Oilers won about 0.433 of their games. The Vancouver Canucks won about $\frac{6}{10}$ of their games.



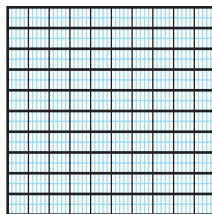
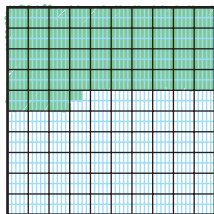
Which team won a greater portion of its games?



Desmond's Thinking

To show 0.433 or $\frac{433}{1000}$, I'll colour 433 tiny rectangles on a thousandths grid.

To show $\frac{6}{10}$, I'll rename the tenths as thousandths by dividing another thousandths grid into 10 equal parts.



- Represent $\frac{6}{10}$ on a thousandths grid.
- Write a fraction with a denominator of 1000 that is equivalent to $\frac{6}{10}$.

- C. How can you use your fraction for Part B to write a decimal that is equivalent to $\frac{6}{10}$?
- D. Which team won a greater portion of its games?

Reflecting

- E. Why was it a good idea to rename $\frac{6}{10}$ as a decimal thousandth to find out which team won a greater portion of its games?



Checking

1. Last year, $\frac{5}{10}$ of the students in Madelyn's class played soccer. This year, 0.30 of the students in Madelyn's class play soccer. How does the portion of soccer players last year compare with the portion of soccer players this year? Use grids to explain.

Practising

2. A survey of 1000 students showed that 0.75 of the students are going on a summer holiday. The survey also showed that 253 students are going on a March break holiday. Which is a greater portion of students? Explain how you know.
3. The chart to the left shows the portion of games won by some NHL teams. Order the teams from the greatest to the least portion of games won.
4. In Tara's school, 27 out of every 100 students attend school basketball games. In Aaron's school, 352 out of every 1000 students attend school basketball games. Which school has a greater portion of students attending its basketball games? Explain.
5. How could you compare 0.213 and $\frac{43}{100}$ using equivalent fractions? How could you compare these fractions using equivalent decimals?

Comparing NHL wins

Team	Portion of games won
Calgary	0.585
Phoenix	$\frac{4}{10}$
Dallas	0.65